

WHAT IS CLAIMED IS:

1. An electret condenser microphone for receiving an acoustic wave to be converted to an acoustic signal indicative of said acoustic wave, comprising:
 - 5 a casing member having a center axis passing therethrough, said casing member including a circular inlet portion, and a cylindrical side portion integrally formed with said inlet portion of said casing member, said side portion of said casing member having a first section close to said inlet portion of said casing member, and a second section remote from said inlet portion of said casing member, said second
 - 10 section of said side portion of said casing member being radially inwardly bent toward said center axis of said casing member;
 - a printed circuit board in the form of a circular shape and disposed in said casing member to be held in contact with said second section of said side portion of said casing member, said casing member and said printed circuit board collectively
 - 15 forming a cylindrical casing space;
 - an electrode plate accommodated in said casing space of said casing member;
 - an electrically connecting member intervening between said printed circuit board and said electrode plate to have said printed circuit board and said electrode
 - 20 plate electrically connected with each other, said electrically connecting member being partly disposed on and along the circumference of said printed circuit board; and
 - a diaphragm located between said inlet portion of said casing member and said electrode plate to be spaced apart along said center axis of said casing member
 - 25 from said electrode plate at a predetermined space distance.
 2. An electret condenser microphone as set forth in claim 1, which further comprises an electrically insulating member accommodated in said casing space of said casing member and provided on said printed circuit board, in which said
 - 30 electrode plate is mounted on said electrically insulating member and retained by said electrically insulating member.
 3. An electret condenser microphone as set forth in claim 1, which further comprises a diaphragm supporting member accommodated in said casing space of
 - 35 said casing member and supported by said inlet portion of said casing member, in which said diaphragm is mounted on said diaphragm supporting member and supported by said diaphragm supporting member.

4. An electret condenser microphone as set forth in claim 1, which further comprises an electrically insulating spacer intervening between said electrode plate and said diaphragm to have said electrode plate and said diaphragm spaced apart from each other at said predetermined space distance.

5. An electret condenser microphone as set forth in claim 1, which further comprises a covering member provided on said inlet portion of said casing member.

6. An electret condenser microphone as set forth in claim 1, in which said electrode plate and said diaphragm collectively constitute a capacitor unit to generate an electrical capacitance corresponding to the space distance between said electrode plate and said diaphragm under the state that said acoustic wave is transmitted to said diaphragm to have said diaphragm partly oscillated along said center axis of said casing member with respect to said casing member.

7. An electret condenser microphone as set forth in claim 6, which further comprises a signal converting unit for converting said electrical capacitance generated by said capacitor unit to said acoustic signal indicative of said acoustic wave transmitted to said diaphragm.

8. An electret condenser microphone as set forth in claim 7, in which said signal converting unit is accommodated in said casing space of said casing member and provided on said printed circuit board to be electrically connected to said electrode plate and said diaphragm, respectively.

9. An electret condenser microphone as set forth in claim 7, in which said signal converting unit includes a field effect transistor, a chip capacitor and a resistor.

10. An electret condenser microphone as set forth in claim 1, in which said electrode plate has thereon an electret film opposing and spaced apart along said center axis of said casing member from said inlet portion of said casing member.

11. An electret condenser microphone as set forth in claim 1, in which said diaphragm is made of an electret film.

12. An electret condenser microphone as set forth in claim 1, in which said

electrically connecting member is in the form of a column shape and has first and second end surfaces under the state that said first end surface is held in contact with said electrode plate, and said second end surface is held in contact with said printed circuit board.

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13. An electret condenser microphone as set forth in claim 1, in which said electrically connecting member is in the form of a channel shape and has first and second end surfaces under the state that said first end surface is held in contact with said electrode plate, and said second end surface is held in contact with said printed circuit board.

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14. An electret condenser microphone for receiving an acoustic wave to be converted to an acoustic signal indicative of said acoustic wave, comprising:

a casing member having a center axis passing therethrough, said casing member including a circular inlet portion, and a cylindrical side portion integrally formed with said inlet portion of said casing member, said side portion of said casing member having a first section close to said inlet portion of said casing member, and a second section remote from said inlet portion of said casing member, said second section of said side portion of said casing member being radially inwardly bent toward said center axis of said casing member;

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a printed circuit board in the form of a circular shape and disposed in said casing member to be held in contact with said second section of said side portion of said casing member, said casing member and said printed circuit board collectively forming a cylindrical casing space;

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an electrode plate accommodated in said casing space of said casing member;

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a plurality of electrically connecting members each intervening between said printed circuit board and said electrode plate to have said printed circuit board and said electrode plate electrically connected with each other, said electrically connecting members being partly disposed on and along the circumference of said printed circuit board; and

a diaphragm located between said inlet portion of said casing member and said electrode plate to be spaced apart along said center axis of said casing member from said electrode plate at a predetermined space distance.

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15. An electret condenser microphone as set forth in claim 14, which further comprises an electrically insulating member accommodated in said casing space of

said casing member and provided on said printed circuit board, in which said electrode plate is mounted on said electrically insulating member and retained by said electrically insulating member.

5 16. An electret condenser microphone as set forth in claim 14, which further comprises a diaphragm supporting member accommodated in said casing space of said casing member and supported by said inlet portion of said casing member, in which said diaphragm is mounted on said diaphragm supporting member and supported by said diaphragm supporting member.

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17. An electret condenser microphone as set forth in claim 14, which further comprises an electrically insulating spacer intervening between said electrode plate and said diaphragm to have said electrode plate and said diaphragm spaced apart from each other at said predetermined space distance.

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18. An electret condenser microphone as set forth in claim 14, which further comprises a covering member provided on said inlet portion of said casing member.

19. An electret condenser microphone as set forth in claim 14, in which said
20 electrode plate and said diaphragm collectively constitute a capacitor unit to generate an electrical capacitance corresponding to the space distance between said electrode plate and said diaphragm under the state that said acoustic wave is transmitted to said diaphragm to have said diaphragm partly oscillated along said center axis of said casing member with respect to said casing member.

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20. An electret condenser microphone as set forth in claim 19, which further comprises a signal converting unit for converting said electrical capacitance generated by said capacitor unit to said acoustic signal indicative of said acoustic wave transmitted to said diaphragm.

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21. An electret condenser microphone as set forth in claim 20, in which said signal converting unit is accommodated in said casing space of said casing member and provided on said printed circuit board to be electrically connected to said electrode plate and said diaphragm, respectively.

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22. An electret condenser microphone as set forth in claim 20, in which said signal converting unit includes a field effect transistor, a chip capacitor and a resistor.

23. An electret condenser microphone as set forth in claim 14, in which said electrode plate has thereon an electret film opposing and spaced apart along said center axis of said casing member from said inlet portion of said casing member.

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24. An electret condenser microphone as set forth in claim 14, in which said diaphragm is made of an electret film.

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25. An electret condenser microphone as set forth in claim 14, in which each of said electrically connecting members is in the form of a column shape and has first and second end surfaces under the state that said first end surface is held in contact with said electrode plate, and said second end surface is held in contact with said printed circuit board.

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26. An electret condenser microphone as set forth in claim 14, in which each of said electrically connecting members is in the form of a channel shape and has first and second end surfaces under the state that said first end surface is held in contact with said electrode plate, and said second end surface is held in contact with said printed circuit board.

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